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## Researches Classified – Panels Award – Clinical Area

## Prevalence and evolution of the inflammatory manifestations of Graves' disease

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**Introduction.** Graves' orbitopathy (GO) is a major extra thyroid manifestation of Graves' disease (GD). One of the forms to analyse GO in GD is the use of the Clinical Activity Score (CAS), which includes: eyelid swelling, eyelid erythema, conjunctival erythema, chemosis, caruncle edema, spontaneous ocular pain and gaze-evoked orbital pain. Each item receives a 1-point score and its sum defines the activity score. GO is characterised by the presence of at least 3 of the 7 items.

**Objectives.** To evaluate the prevalence, during diagnosis and follow-up, of each of the parameters of the CAS in patients with GO who are smokers and non-smokers.

**Methods.** This was a retrospective study involving 462 patients diagnosed with GD, of whom 211 had GO and were evaluated by the CAS. The incidence of each of its parameters was calculated from the first record (T0) to T60, 5 years later. The patients were divided into smokers (82) and non-smokers (129).

**Results.** The non-smokers group had an average CAS in T0 of  $1.50 \pm 1.50$ , T6 of  $1.34 \pm 1.44$ , T12 of  $1.14 \pm 1.2$ , T24 of  $1.02 \pm 1.2$ , T36 of  $1.03 \pm 1.44$  and T48 of  $0.84 \pm 1.29$ . In T60 the average reduced to  $0.97 \pm 1.49$ . In the group of smokers, the average CAS in T0 was  $1.79 \pm 1.67$ , T6 of  $1.86 \pm 1.59$ , T12 of  $1.73 \pm 1.38$ , T24 of  $1.4 \pm 1.7$ , T36 of  $1.24 \pm 1.21$ , T48 of  $1.56 \pm 1.38$  and in T60,  $1.40 \pm 1.49$  ( $p < 0.05$ ). Both groups showed progressive improvement of CAS up to T60 ( $p < 0.05$ ). In the diagnosis, the positive smoking group presented more ocular pain ( $p = 0.011$ ), pain at movement ( $p = 0.02$ ), conjunctival erythema ( $p = 0.003$ ), caruncle edema ( $p = 0.0001$ ) and eyelid swelling ( $p = 0.005$ ).

**Conclusion.** The smokers' group presented higher CAS throughout the follow-up. In 212 patients, palpebral edema was the most frequent in both groups. Pain on the eyeball, pain on eye movement, conjunctival erythema and eyelid swelling were more frequent in the smoking group.

**Keywords:** Graves' orbitopathy; Clinical activity score; Smokers.